



Memorandum

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To: Hon. Carlos Alvarez, Mayor, Miami-Dade County

Cc: George M. Burgess, County Manager
Roger T. Hernstadt, Director, Office of Capital Improvements
Copy filed with the Clerk of the Board

From: Christopher R. Mazzella, Inspector General

Date: February 28, 2007

Subject: Office of Capital Improvements (OCI) Solicitation E06-OCI-01
Subsurface Utility System, Engineering and Mapping Services;
Ref: IG06-92

INTRODUCTION & SYNOPSIS

On November 15, 2006, the Office of the County Manager requested the Office of the Inspector General (OIG) to investigate a complaint it had received from Craig A. Smith & Associates (CAS) regarding the above-captioned solicitation. In light of the OIG's previous involvement on this same solicitation (reference October 5, 2006 memo to OCI Director Roger Hernstadt regarding local preference allegations), the OIG decided to review this one as well.

The complaint from CAS is directed at F.R. Aleman & Associates (FRA), a co-competitor on the subject solicitation. At the time the complaint was received, which was after the tier-two evaluation and scoring by the Competitive Selection Committee (CSC), FRA was ranked first and CAS second in the selection process.

The controversy surrounds CART® (Computer-Assisted Radar Tomography), a proprietary, patented three-dimensional (3-D) radar tomography system. In short, the complainant alleges that FRA misrepresented its qualifications and experience by stating in its proposal that it possessed CART technology. CAS indicated that it is the only company in Florida properly licensed by CART patent-holder, Witten Technologies, Inc. (WTI), to perform CART services.

In summary, our review determined that FRA did not misrepresent that it could provide CART services, when its proposal indicated that such services would be provided through its sub-consultant, General Engineering Geophysics, LLC (GEG). GEG does possess a CART license and that license is held through Mala GeoScience

AB (MALA), the manufacturer of the CART hardware (radar arrays—transmitters and receivers). GEG's license specifically includes CART software, developed by WTI. However, the spate of recent arbitration and threatened litigation between the parties casts enough controversy over the licensing arrangements, that the OIG recommends that OCI, in conjunction with the user departments, re-assess the desired level and capabilities of utility mapping services and, if necessary, revise the specifications of this solicitation and/or procure these services, as-needed, through the Equitable Distribution Pool.

The OIG requests that OCI forward a copy of this memorandum to all five proposing firms on the subject professional services solicitation.

OIG REVIEW

The OIG's research and investigation of this matter consisted of interviews and thorough review of pertinent documents. The OIG also spoke to Office of Capital Improvements (OCI) staff to determine what was needed and what was expected from this solicitation.

The result of the this review is based on our understanding of the technology, the desired services sought by the County, the history of CART development, the agreements between WTI, MALA, GEG, and the results of recent arbitration and correspondences between them. It is also based on our interviews and discussions with CAS and FRA representatives, and the somewhat-limited documentation that was provided to us.

On September 22, 2006, OCI received proposals from five companies regarding the subject solicitation. These companies were Craig A. Smith & Associates, Inc. (CAS), F.R. Aleman & Associates, Inc. (FRA), InFra Map Corp. (IFM), Marlin Engineering, Inc. and TBE Group, Inc.

The Competitive Selection Committee (CSC) appointed by the County Manager for the subject solicitation met on October 4, 2006 and evaluated the written proposals. On October 25, 2006, the CSC heard oral presentations from the three highest ranked companies (CAS, FRA, and IFM), and, thereafter, scored the proposals based on the following criteria:

- Knowledge of Project Scope (50) points
- Qualifications of team members (40) points
- Ability to provide required services within schedule and budget (10) points

The results, after the oral presentations, were that FRA ranked #1 with 93.8 points, CAS ranked #2 with 92.8, and IFM ranked #3 with 88.6 points.¹

The OIG reviewed the solicitation's *Scope of Services*, which is edified in Section 1.2, and is as follows:

The scope of work includes, but is not limited to, radar tomography services on an as needed basis for various County departments. The firm must employ a Florida licensed surveyor and mapper with experience in collecting, interpreting and overseeing radar tomography readings and related subsurface investigation. The Florida licensed surveyor and mapper must sign and seal the work product submitted to the County. Utilization of this technology will assist in damage prevention of underground assets and avoidance of underground hazards and guidance for excavation activities by identifying routes with the least amount of obstacles. These services will be primarily utilized by County departments for their design and construction contracts.

We also reviewed all the addendums to this solicitation. Addendum No. Six states that "sub-consulting opportunities will be open exclusively to team members performing geophysiological services in order to interpret radar tomography data."

The OIG notes that the *Scope of Services* does not specifically require 3-D radar tomography or CART. It only indicates that radar tomography services with some level of computerized data interpretation is required.² The OIG recognizes that these types of solicitations are generally not overly restrictive, so as to encourage competition, as we look for those companies that can offer beyond what is being asked for. In this case, however, given the propriety of CART and the issues surrounding its licensing, we recommend that user departments seeking sub-surface utility mapping services indicate whether it requires 3-D / CART capabilities on any given work engagement.

Our understanding of CART is that it is a proprietary method of capturing, displaying, and interpreting three-dimensional (3-D) radar tomography, and consists of radar arrays (transmitters and receivers) manufactured by Mala GeoScience AB

¹ These final evaluation scores include local preference points that were accorded to FRA. Neither CAS nor IFM received local preference points.

² CART stands for Computer-Assisted Radar Tomography. However, in the documentation reviewed, we found several references to "computer-aided radar tomography" written out in long hand—not as an acronym. In other instances, we observed one firm referencing the other firm's characterization as "CART" when it was not stated as an acronym but instead as "computer-aided radar tomography."

(MALA) and computer software programs, developed by WTI, for producing the mapping images from the radar and Global Positioning System (GPS) data. CART is advertised as being accurate to within ± 2 inches in locating underground utilities to a depth of 10 feet. As advertised, the extremely accurate 3-D mapping capability is what sets CART apart from other radar tomography systems that are available in the marketplace.

Documents reviewed by the OIG reveal that during September 1997 MALA and WTI entered into a Prototype Development Agreement (PDA) and a License Agreement (LA) for the purpose of working together in the development of a device (later designated as CART®) for the detection of subsurface utility services. Several years later, in October 2002, after such a device and the accompanying software had been developed, the two companies, MALA and WTI entered into an Exchange and Settlement Agreement (ESA) whereby WTI agreed to provide to MALA five concurrent licenses for the CART computer software developed by WTI, and MALA agreed to lease to WTI the physical CART equipment manufactured by MALA. Respectively, the blueprints for the device and the source code for the software were both placed into escrow with rights secured to the other party.

As for GEG having a license, the ESA states that two of the five licenses provided to MALA “shall be intended for non-exclusive use in the market for utility and non-utility services in North America” and that “MALA shall have the right to sublicense these two licenses to General Engineering Laboratories, Inc.” (parent company of GEG). GEG is listed as FRA’s sub-consultant on the subject solicitation, and GEG’s personnel are listed as team members to interpret CART data.

There has been much correspondence between WTI, MALA, GEG, CAS, and FRA, and the attorneys that represent them, concerning the validity of the WTI software licenses in possession of MALA and GEG (as sub-licensee of MALA). Some of this correspondence indicates that WTI unsuccessfully attempted, thru the International Center for Dispute Resolution, Washington D.C., to force the return of these software licenses. Moreover, it appears that the dispute may have been originated by MALA seeking rescission and/or termination of the License Agreement due to actions and/or non-actions by WTI. The assigned arbitrator ruled, on July 10, 2006, that the License Agreement had not been violated, thereby remaining in full force and effect. The arbitrator also found that the software licenses that had been granted to MALA were pursuant to the ESA, and, therefore, were outside of his jurisdiction. The OIG opines that there will likely be more litigation concerning the CART software licenses.

Since receipt of this complaint and in the course of conducting our review, other issues relating to the sub-contracting arrangements between FRA and GEG have surfaced. The OIG has questioned the role of FRA personnel in the provision of CART

services, since those services—provision of hardware, software, and data interpretation—will necessarily be performed by GEG, as only GEG is licensed. Copies of recent correspondence obtained by the OIG shows WTI challenging FRA's designation of "local preference" because of its sub-contracting arrangement with GEG. The OIG shares these concerns. However, as it relates to the validity of the licenses, we would concur with the arbitration ruling that this matter falls under the ESA, which was not within the jurisdiction of the arbitrator. But, as stated above, from the correspondence we reviewed, this matter is far from resolved.

Our recommendation lies with what are truly the needs of the user departments. OIG staff inquired of OCI of the County's immediate needs for these types of services and the desired level of services, i.e., potentially \$750,000 worth of services over the next two to four years. Should that need not be demanding, OCI may want to re-assess having one \$750,000 professional services agreement. The County may be better served by placing all of the proposing firms in the Equitable Distribution Pool (EDP), so that as departmental needs arise for discrete projects, the desired level of professional services can be obtained from the EDP. Depending on the type of work engagement and the surface area / underground area to be mapped, the more sophisticated CART services may or may not be necessary. Individual work engagements and the level of mapping services can be assessed and then procured on a case-by-case basis.

CONCLUSION AND RECOMMENDATION

- Subject solicitation did not specify that a CART system be utilized.
- The ESA gave five licenses for the WTI developed CART image processing computer software to MALA, and gave MALA the right to sublicense to GEG.
- GEG has the right, as a sub-licensee of MALA, to utilize CART technology in North America.
- GEG has agreed to be a sub-consultant to FRA regarding subject solicitation.
- Recent arbitration has not retracted the software licenses that were given to MALA as an integral part of the ESA.
- There is likely to be additional litigation concerning these software licenses.

In light of the above, the OIG recommends that OCI re-assess its need for one professional services agreement in the amount authorized and, instead, place all proposers, and any other qualified firms, in the EDP for prospective user departments to select firms to provide subsurface mapping services, as needed.

The OIG requests that OCI forward a copy of this memorandum to all five proposing firms on the subject professional services solicitation and notify the OIG as to what action the County will take relative to this matter.